

and geographical distribution of the various sorts. The book is full of good information put in an attractive style and should find abundant welcome.—
O. W. CALDWELL.

MINOR NOTICES.

THE THIRD FASCICLE of "Illustrations de la Flore du Congo," by Wil-
deman and Durand, has just appeared, containing twelve plates, with des-
criptive text. The plates are exceedingly handsome, and their number has
now reached thirty-six.—J. M. C.

A NEW classification of the Leucobryaceæ is proposed by M. Jules
Cardot in *Revue Bryologique* 26: 1-8. *pl. 1.* 1899. It is based chiefly upon
the anatomical characters of the leaves as shown by cross-sections, such as
the presence or absence of sclereides, and the form and arrangement of the
chlorophyllose cells.—C. R. B.

SOME RESEARCHES of Loeb upon the influence of alkalies and acids
upon embryonal development and growth⁷ led to results which may have
important applications to the growth of plants. He finds that weak alkalies
(even .006% NaHO) accelerate the development and growth of larvæ of
Arbacia (a sea-urchin) and the embryos of Fundulus (a fish), while weak
acids retard. The cause of these actions is to be sought in the effect of the
reagents on the oxidative processes of the protoplasm.—C. R. B.

NOTES FOR STUDENTS.

GEORGE J. PEIRCE has been studying the nature of the association of alga
and fungus in lichens.⁸ Speaking of the algæ he says that "it is neither
logical nor sensible to conclude that their unusual position is beneficial to
them," as free algæ can thrive, at least for a time, wherever lichens can.
"There is no proof that algal cells serving as lichen gonidia are any better
off as to food, protection, or situation than the average free algal cells of the
same species." Of course the fungus is found to be absolutely dependent
upon the alga. The author also affirms that the central body of the gonidial
cells of Ramalina, Usnea, and Sphærophorus, is a nucleus, not a pyrenoid.—
J. M. C.

HERMANN VON SCHRENK⁹ has been investigating a disease of *Taxodium*
known as peckiness, and also a similar disease of *Libocedrus decurrens*. In
both cases the wood is destroyed in localized areas, which are surrounded by

⁷ Archiv f. Entw.-mechanik der Organismen 7: 631-641. *pl. 1.* 1898.

⁸ Proc. Calif. Acad. Sci. III. 1: 207-240. *pls. 41.* 1899.

⁹ Eleventh Ann. Rep. Mo. Bot. Gard. 1-55. *pls. 6.* 1899.